



# **Export/Import Licensing Requirements for NRC-Controlled Commodities**

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## Overview

- Scope of NRC import/export authority
- General licensing
- Specific licensing
- Nuclear exports and imports
- Radioactive source exports and imports
- Waste exports and imports

## Statutory Authority

- Atomic Energy Act of 1954
- Energy Reorganization Act of 1974
- Nuclear Non-Proliferation Act of 1978
- Energy Policy Act of 1992
- Energy Policy Act of 2005
- International Treaties

# **10 CFR Part 110 Export/Import Licensing Regulations**

- Apply to any person who exports or imports nuclear equipment and material with few exceptions
- Authorize export/import only – Part 110 does not authorize receipt, acquisition, transfer, transport or possession
- Require compliance with applicable domestic requirements
- Implement legally binding and non-legally binding international treaties and agreements

## **NRC's Export/Import Licensing Authority**

- Exports: reactors; fuel cycle facilities; components; nuclear grade graphite for nuclear end use; heavy water; source, special nuclear and byproduct materials including spent fuel and radioactive waste
- Imports: complete reactors; fuel cycle facilities; and source, special nuclear and byproduct materials including spent fuel and radioactive waste

## **10 CFR Part 110 not applicable to:**

- DOD and DOE for selected activities
- Exports/imports of Munitions List items (DoD)
- Exports/imports of “dual use” equipment (DoC)
- Imports of deuterium, nuclear grade graphite and minor reactor components
- Transshipments

## If subject to 10 CFR Part 110:

- If subject to 10 CFR Part 110, NRC-controlled commodities must be authorized by either:
  - A **general** export or import license or
  - A **specific** export or import license
- Exemptions can be granted on a case-by-case basis (none to date)

## General licenses for exports/imports:

- Issued in Part 110 regulations and authorize:
  - Exports of small quantities of source, special nuclear materials
  - Exports of minor reactor components to select countries
  - Most imports (except for radioactive waste) if U.S. recipient is authorized to possess the material
- “Paperless” but not the same as license exemptions or “no license required”

## **General Licenses in 10 CFR 110.21-27**

- Tritium- limits in 110.23(a)8
- Americium and Neptunium annual reporting requirements in 110.23(a)5-6
- Import dependent on domestic possession license in 110.27
- Waste excluded from general licenses for import (110.27) and export (110.21(d), 110.22(e), and 110.23(a)1)

## General licenses for exports/imports:

- Do not authorize exports to embargoed destinations (10 CFR 110.28):

Cuba

Iran

Iraq

North Korea

Syria

Sudan

## General licenses for exports/imports:

- Authorize only limited exports to restricted destinations (10CFR110.29):

Afghanistan

Andorra

Angola

Burma (Myanmar)

Djibouti

India

Israel

Libya

South Sudan

Pakistan

## Specific Licenses - Review Process

- All applications (NRC Form 7) made public in ADAMS
- Some require Federal Register notices
- Interested parties have up to 30 days to respond
- Processing fee is commensurate with level of review required (proliferation significance of commodity)
  - Most require interacting with foreign governments
  - Some require review by interested Executive Branch agencies, coordinated by Department of State
  - Some require review and approval by Commissioners

## Specific Licenses - Review Process

- It can take anywhere from 40 days to 4 months or more to coordinate internal and interagency reviews
- Applications may be withdrawn or returned without action
- Licenses may be issued or denied
- Licenses issued:
  - Are signed by OIP Deputy Director
  - Name parties, identify end users and end uses
  - Set expiration dates
  - Can be amended and renewed prior to expiration date

# Specific License Types for Nuclear Material

- Are assigned a docket number (1100XXXX) and one of the following prefixes:
  - XSNM = export of special nuclear material
  - XSOU = export of source material
  - XMAT = export of material (i.e., deuterium)
  - XB = export of byproduct material (Appendix L)
  - XR = export of reactor (or major components)
  - XCOM = export of minor components
  - XW = export of radioactive waste
  - IW = import of radioactive waste

## Criteria for “Major” (XSNM, XSOU, XR) Exports

- Agreement for Cooperation (123 Agreement)
- Full-scope IAEA safeguards in recipient non-nuclear weapon states (NNWS)
- U.S. Government must obtain assurances from the foreign government on case-by-case basis that material or equipment will be made subject to 123 Agreement with respect to:
  - No nuclear explosive use or R&D on any nuclear explosive device
  - Adequate physical security will be maintained
  - No retransfer or alteration in form (reprocessing) without prior U.S. Government consent

## Criteria for “Major” (XSNM, XSOU, XR) Exports (Continued)

- Not inimical to common defense and security, and
- For XR, not an unreasonable risk to the public health and safety of the U.S.

## Criteria for “Minor” (XCOM, XMAT) Exports

- U.S. Government must obtain assurances from the foreign government on case-by-case basis that:
  - IAEA (full-scope) safeguards will apply in NNWS
  - No nuclear explosive use or R&D on such device
  - No retransfer without prior U.S. Government consent
- Not inimical to common defense and security

## Appendix P Licensing

- Appendix P added to 10 CFR 110 in 2005 to implement the IAEA's Code of Conduct which includes Guidance on Import and Export
- 2005 rulemaking added specific license requirements for exports and imports of Category 1 and 2 sources above the threshold cited in the Code and Appendix P
- Outreach done by the NRC since such exports/imports were previously authorized by general licenses and affected companies were less familiar with 10 CFR 110
- Due to increased domestic security, a 2010 rulemaking removed the specific license requirement so imports of "Appendix P" materials may be authorized under a general license with a pre-shipment notification

## Appendix P Thresholds

Radioactive Material	Category 1 (TBq)	Category 2 (TBq)
Americium 241	60	0.6
Americium 241/Beryllium	60	0.6
Californium 252	20	0.2
Curium 244	50	0.5
Cobalt 60	30	0.3
Cesium 137	100	1
Gadolinium 153	1000	10
Iridium 192	80	0.8
Promethium 147	40000	400
Plutonium 238	60	0.6
Plutonium 239/Beryllium	60	0.6
Radium 226	40	0.4
Selenium 75	200	2
Strontium 90 (Yttrium 90)	1000	10
Thulium 170	20000	200
Ytterbium 169	300	3

## Appendix P Export Criteria

- Foreign recipient authorized to receive and possess
- Importing country has resources & regulatory capability; or meets “exceptional circumstances”
- Importing country provides consent for Category 1 amounts and “exceptional circumstances”
- No adverse information concerning foreign recipients or importing country
- Not inimical to U.S. common defense and security

## Licenses for Appendix P Materials

- Establish individual Category 1 and/or Category 2 shipment quantities per radionuclide
- Often list multiple radionuclides and authorize shipments to multiple foreign destinations
- Are valid from 1-10 years depending on established limits
- Require pre-shipment notifications to the NRC Headquarters Operations Office ([hoo.hoc@nrc.gov](mailto:hoo.hoc@nrc.gov))
- May include special conditions such as requiring licensee to request and the NRC to authorize each shipment of Category 1 quantities of material depending on the foreign government's consent

## Criteria for Exports of Radioactive Waste (XW)

- Not inimical to common defense and security
- Recipient country:
  - Has the administrative, technical capacity and regulatory structure to manage and dispose
  - Consents to its receipt

# Criteria for Imports of Radioactive Waste (IW)

- Not inimical to the common defense and security
- Not an unreasonable risk to the public
- An appropriate facility has agreed to accept for management or disposal

## **Specific License Requirements** **for Radioactive Waste**

- A Specific license is required if a specific radioactive material license is required to possess the material domestically
- Specific license required if it is exported or imported for:
  - 1) disposal in a land disposal facility defined as defined in 10 CFR Part 61 or in an Appendix A to Part 40 disposal area, or an equivalent facility; or
  - 2) recycling, waste treatment or other waste management process that generates radioactive material for disposal in a land disposal facility defined in Appendix A to Part 40 or an equivalent facility

## Review for Waste Cases

- IW and XW applications often are submitted as a pair (i.e., import, processing and return)
- For new IW and XW cases, a Federal Register Notice is always required and includes a 30-day comment period
- OIP sends a letter to the State Department who coordinates obtaining Executive Branch review and includes interaction with the foreign country
- OIP sends letters to the State(s) and Compact(s) that may be affected by import/processing/disposition of material
- OIP consults with FSME and NMSS points of contact to evaluate potential health & safety and safeguards/nonproliferation concerns
- Once responses are received from the Executive Branch, State(s) and Compact(s), the license is drafted

## Questions on Import or Export?

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